



LINK ELECTRONICS, INC.

CLOSED CAPTION SERIES

PORABLE CAPTION ENCODER-DECODER DIGITAL OR ANALOG MODEL ENC-896



MADE IN THE USA

**TSID
READY**



AC Power Supply
(supplied)



FEATURES

- ◆ Encoder
- ◆ Decoder
- ◆ Data Recovery
- ◆ Field 1 or Field 2
- ◆ Analog Open CC Out
- ◆ Weather Lift, User Defined
- ◆ Analog Closed CC Out
- ◆ Optional Modem
- ◆ Modem Indication
- ◆ SDI I/O
- ◆ Analog Composite I/O
- ◆ Power-Up Mode, User Defined
- ◆ Caption & Text
- ◆ Two Composite Outputs
- ◆ RS-232C/ 422 Controlled
- ◆ V-Chip Compatible
- ◆ Power Down Protect
- ◆ Auto-Detect, PAL/NTSC

The ENC-896 is both a Closed Caption Encoder and Decoder capable of inserting and decoding caption and text data on NTSC, PAL, Analog Y/C, RGB, YUV, and SDI.

Caption and Text data may be inserted in either field of the Vertical Blanking Interval. In addition, data on the incoming video signal may be recovered from either field of the VBI. This incoming data may be displayed as Open Captions, using the built-in Closed Caption Decoder, and captured by a computer utilizing the ENC-896's serial data port. Each of these important functions, Encoding, Decoding, and Data Recovery may be done simultaneously.

The Closed Caption Decoder's functions may be controlled from the front panel while the Encoder and Data Recovery functions are controlled via the serial data port, on the SDI and analog composite and the open caption outputs..

Inputs and outputs are provided for, not only NTSC and PAL, but also Analog Y/C, RGB, YUV, and SDI. The power-loss feature by-passes the analog and SDI when AC power to the ENC-896 fails.

In response to the FCC mandated requirements, captions shall not interfere with emergency crawls.

The ENC-896 incorporates a weather-lift feature that moves the captioning up 1 to 3 lines whenever a contact-closure is detected on it's GPI input.

For remote captioning applications, a second serial port is available as a modem input. Both serial ports may be configured for RS-232 or RS-422 I/O. Front panel DIP switches are provided to select the baud rate selections of 1200, 2400, 4800, and 9600 bps.

Modem speeds are 1200 or 2400 baud. The modem takes priority over the serial port, and when the modem hangs up, the ENC-896 is restored to the last mode left by the modem.

Front panel LED's show the unit status and the presence of serial data. A pair of front panel push-buttons allow the user to run an encoded test message or to place the unit in by-pass mode.

The ENC-896 is ready for V-Chip technology. LINK Electronics is incorporating this technology in the firmware of the ENC-896. The ENC-896 handles the automatic repetition of the "V-Chip" data and can interleave it with existing Line 21 Closed Caption data.

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MODEL ENC-896 CAPTION ENCODER/DECODER DIGITAL AND ANALOG SPECIFICATIONS

ANALOG INPUT:

NTSC/PAL/RGB/YUV/YC:

Inputs: One
 NTSC / PAL / G / Y Level: 1.0Vpp \pm 4dB
 RB / UV / C Level: 0.7Vpp (100% Sat.) \pm 4dB
 Impedance: 75 Ω , Terminated
 Connectors: BNC (x3)
 Return Loss: 40dB
 Maximum DC on Input: 3.2V DC
 Common Mode Range: 6.4V p-p

SDI INPUT:

Number: One
 Standard: SMPTE 259M-C 270Mb/s
 Connector: 75 Ω BNC
 Impedance: 75 Ω \pm 1%
 Return Loss: >18dB to 270MHz
 Signal Level: 800mV \pm 10%

OUTPUTS:

NTSC/PAL/RGB/YUV/YC:

Number of Outputs: Two
 NTSC / PAL / G / Y Level: 1Vp-p \pm 1dB
 RB / UV / C Level: 0.7Vpp (100% Sat.) \pm 1dB
 Insertion Gain: Unity
 Impedance: 75 Ω
 Connectors: BNC
 Bandwidth: 26MHz
 Tilt: <1% ref. 30Hz square wave
 Hum: >70dB, 1.0Vp-p
 Overshoot & Ringing: <1%
 Propagation Delay: 30nS \pm 5%
 S/N Ratio: >60dB
 Differential Gain <0.1%
 Differential Phase <0.1°
 DC Offset <0.2Vdc

SDI OUTPUT:

Number: Two (2)
 Standard: SMPTE 259M-C 270Mb/s
 Connector: 75 Ω BNC
 Impedance: 75 Ω \pm 1%
 Return Loss: >18dB to 270 MHz
 Signal Level: 800mV \pm 10%

DECODER:

Output: Two
 Level: 1.0Vpp \pm 1dB
 Character Video: 90 IRE
 Character Background: 10 IRE
 Frequency Response: -3dB to 26MHz
 Differential Gain <0.1%
 Differential Phase <0.1°
 DC Offset <0.2Vdc
 Line Rate Tilt: <0.1%
 Field Rate Tilt: <0.1%

WEATHER-LIFT (GPI) INPUT:

Open Circuit Voltage: 5.0V DC
 Maximum Source Current: 0.5mA
 Maximum Overload Input +12V to -7V

FRONT PANEL CONTROLS:

AC Power: On/Off
 By-Pass Push/Push, Maintained
 Test: Push/Push, Momentary
 LED's: Video Presence
 Modem Status: RI, OH, CD, Serial Data, Pedestal

LCD DISPLAY:

Encoding: Field 1 or Field 2
 Decoding: CC1-4, T1-T4, & XDS
 Standard: NTSC or PAL, Analog or Digital
 Baud Rate: 1200, 2400, 4800 or 9600

REAR PANEL:

Modem Connection: 9 Pin D wired as DTE
 Computer Connection: 9 Pin D wired as DCE

ENVIRONMENTAL:

Temperature: 0° to 50°C (ambient)
 Humidity: 10% to 90% non-condensing
 Power: 24 Watts
 AC Input: 120/240VAC (\pm 10%) 50/60Hz

MECHANICAL:

Height: 2.25 Inches
 Width: 14.5 Inches
 Depth: 10 Inches
 Weight: 3.5 Lbs.

